

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
9 September 2005 (09.09.2005)

PCT

(10) International Publication Number
WO 2005/081752 A3(51) International Patent Classification⁷: A61K 31/785,
31/765

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:
PCT/US2005/000174

(22) International Filing Date: 6 January 2005 (06.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/542,277 9 February 2004 (09.02.2004) US
60/542,298 9 February 2004 (09.02.2004) US(71) Applicant (for all designated States except US):
AMULET PHARMACEUTICALS, INC. [US/US];
1450 South Rolling Road, Baltimore, MD 21227 (US).

(84) Designated States (unless otherwise indicated for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ARNOLD, Ernst, V. [US/US]; 436 Liberty Street, Hagerstown, MD 21740 (US). DOLETSKI, Blaine, G. [US/US]; 7134 Duckett's Lane, Elkridge, MD 21075 (US). RAULLI, Robert, E.; 10443 Moore Drive, Manassas, VA 20111 (US).

(74) Agents: GOTTS, Lawrence, J. et al.; Shaw Pittman LLP, 1650 Tysons Boulevard, McLean, VA 22102-4859 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

Published:

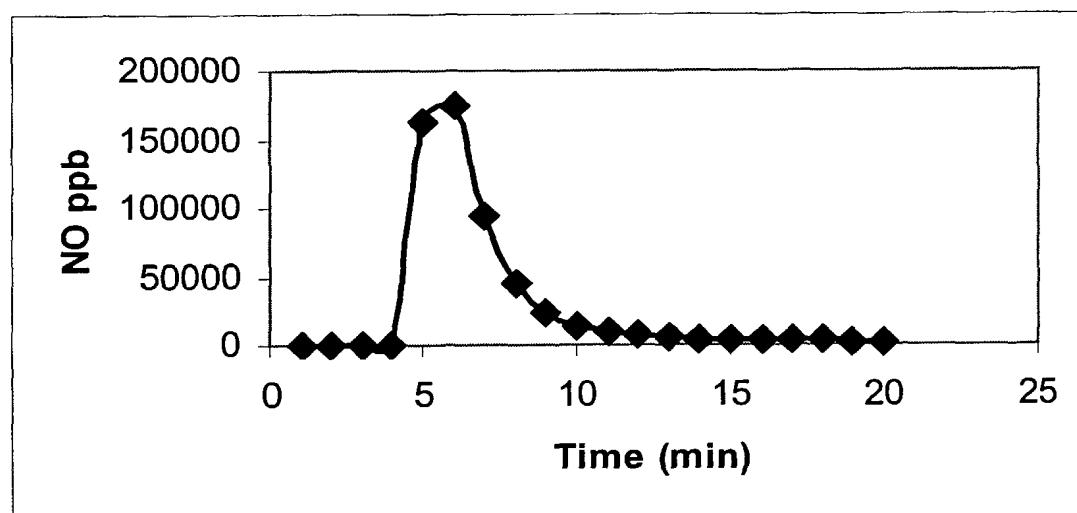
- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

2 March 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: NITRIC OXIDE-RELEASING POLYMERS



WO 2005/081752 A3

(57) Abstract: This invention relates to compositions comprising carbon-based diazeniumdiolates attached to hydrophobic polymers that releases nitric oxide (NO). The carbon-based diazeniumdiolated polymers release NO spontaneously under physiological conditions without subsequent nitrosamine formation. The present invention also relates to methods of preparing the carbon-based diazeniumdiolated polymers, compositions comprising such polymers, methods of using such compositions, and devices employing such polymer compositions.